

In the Claims

Please amend the claims as follows:

1-28. Canceled

29. (Currently amended) A coated medical device comprising a medical device including one or more surfaces coated with a coating formed from a composition including self-assembling monolayer molecules covalently adjoined to the one or more surfaces ~~with~~ via activation of the one or more latent reactive groups.

30. (Previously presented) The medical device according to claim 29 wherein the self-assembling monolayer molecules comprise amphiphilic molecules comprised of either: a) a hydrophobic domain which spontaneously associates with the surface from a polar solvent, and of a hydrophilic domain which allows the molecules to be dispersed in the polar solvent and which remains associated with the polar phase after monolayer formation on the surface, or b) a hydrophilic domain which spontaneously associates with the surface from a nonpolar solvent, and of a hydrophobic domain which allows the molecules to be dispersed in a nonpolar solvent and which remains associated with the nonpolar phase after monolayer formation on the surface.

31. (Previously presented) The medical device according to claim 29 wherein the self-assembling monolayer is adapted for use with substantially flat or molded surfaces.

32. (Previously presented) The medical device according to claim 31 wherein the one or more surfaces of the medical device are provided by a material selected from ceramics, metals and polymeric materials.

33. (Previously presented) The medical device according to claim 31 wherein the one or more surfaces of the medical device are provided by a material selected from organosilane-pretreated glasses, organosilane-pretreated silicon materials, and silicon hydrides.

34. (Previously presented) The medical device according to claim 31 wherein the material comprises a polymeric material selected from the group consisting of polystyrene, polycarbonate, polyester, polyethylene, polyethylene terephthalate (PET), polyglycolic acid (PGA), polyolefin, poly-(p-phenyleneterephthalamide), polyphosphazene, polypropylene, polytetrafluoroethylene, polyurethane, polyvinyl chloride, polyacrylate (including polymethacrylate), and silicone elastomers, as well as copolymers and combinations thereof.

35. (Previously presented) The medical device according to claim 29 wherein the medical device comprises an implantable biosensor.

36. (Previously presented) The medical device according to claim 29 wherein the medical device is an implantable device having small pores.

37. (Previously presented) The medical device according to claim 36 wherein the medical device comprises a distal protection device for use in various vascular surgical procedures.

38. (Previously presented) The medical device according to claim 29 wherein the latent reactive groups comprise photoreactive groups in the form of photoreactive aryl ketones.

39. (Previously presented) The medical device according to claim 29 wherein the self-assembling monolayer molecules themselves provide thermochemical reactive groups and wherein binding molecules are attached to the monolayer by reaction between corresponding reactive groups of the binding molecules and the reactive groups of the self-assembling monolayer molecules.

40. (Previously presented) The medical device according to claim 39 wherein the binding molecules have one or more corresponding thermochemical reactive groups attached to the self-assembling monolayer molecules via thermochemical interactions between their respective thermochemical reactive groups, and wherein the surface is coated with the monolayer in order to provide an immobilized self-assembling monolayer having the binding molecules attached thereto.

41. (Previously presented) The medical device according to claim 40 wherein the binding molecule is selected from the group consisting of coupling molecules and

biological polymers, and the binding molecules are attached to the self-assembling monolayer molecules prior to coating and immobilizing the self-assembling monolayer.

42. (Previously presented) The medical device according to claim 29 wherein the molecules are selected from the group consisting of linoleamide poly(ethylene glycol) and polyethers.

43. (Previously presented) The medical device of claim 29, wherein the medical device is implanted into a body to provide a passivating effect.

44. (Previously presented) The medical device of claim 44 wherein the latent reactive groups are provided by the surface itself.

45. (Previously presented) The medical device of claim 44 wherein the self-assembling monolayer forming molecules have themselves been provided with latent reactive groups.

46. (Previously presented) A coated medical device comprising a medical device including a surface coated with a self-assembling monolayer, the self-assembling monolayer formed by the steps of: a) providing on the surface both latent reactive groups and a monolayer formed of self-assembling monolayer molecules, and b) activating the latent reactive groups under conditions suitable to covalently attach the self-assembled monolayer to the surface and to form a stable monolayer film on the surface, by initiating

polymerization of suitable groups provided by self-assembling monolayer molecules and/or by forming intermolecular bonds between the self-assembling monolayer molecules.

47. (Previously presented) The medical device of claim 46 wherein the latent reactive groups are provided by the surface itself.

48. (Previously presented) The medical device of claim 46 wherein the self-assembling monolayer forming molecules have themselves been provided with latent reactive groups.

49. (Previously presented) The medical device of claim 46 wherein the self-assembling monolayer molecules are amphiphilic molecules comprising a plurality of hydrophobic and hydrophilic domains.

50. (Previously presented) The medical device of claim 49 wherein the hydrophilic domain comprises a polyether.

51. (Previously presented) The medical device of claim 49 wherein the hydrophobic domain comprises poly (propylene oxide), poly (butylene oxide), or a fatty acid.